REMARKS

These remarks are in response to the Office Action mailed May 7, 2004.

Claim 15

Claim 15 stands rejected as anticipated by Anderson. Anderson discloses a keyboard for a computer editing system. Although this keyboard does not include any keys labeled as jog keys, Anderson states that some systems also feature a jog function. Anderson goes on to state that activating "jog" and pushing either the "advance" or "retard" control jogs the playback VTR one frame per button push.

But Anderson's "jog" function is different from the "shuttle" function as now claimed in amended claim 15. A jog functions allows a user to advance through video material one frame at a time. In contrast, a shuttle function allows the user to view multiple images from the video material at different predetermined shuttle speeds. More specifically, claim 15 as now amended indicates that a first actuation of a first key in a paused condition causes images of the video material to be presented to the user at a predetermined first forward shuttle speed. A second actuation of the first key after the first actuation of the first key causes a change in forward shuttle speed from the first forward shuttle speed to a predetermined second forward shuttle speed that is faster than the first forward shuttle speed. Conversely, a first actuation of the third key in the paused condition causes images of the video material to be presented to the user at a predetermined first reverse shuttle speed, and a second actuation of the third key after the first actuation of the third key causes a change in reverse shuttle speed from the first reverse shuttle speed to a second reverse shuttle speed that is faster than the first reverse shuttle speed.

This aspect of the invention can allow a user to efficiently and intuitively shuttle backwards and forwards through material at different speeds to find an edit point using only a few keystrokes of three fingers of one hand. For example, a user could begin shuttling through a large video file by pressing the forward shuttle key three times to quickly shuttle toward a desired edit point at triple speed. If the user then passes the edit point, he or she can begin reverse shuttling in a single keystroke to achieve a single-speed reverse shuttling and then pause at the edit point with another keystroke. This shuttling interface therefore allows a user to reach an edit point efficiently and intuitively while leaving one hand free to perform other operations.

Anderson's one-frame jog operations do not disclose the speed-changing shuttling operations as now claimed in amended claim 15. Specifically, Anderson's discloses an interface in which a single button push jogs the playback VTR by one frame. There is no disclosure or suggestion that a first actuation in a paused condition can cause images of the video material to be presented to the user at a predetermined first shuttle speed, with a second actuation then causing a change from the first shuttle speed to a faster shuttle speed. And while the shuttling operations according to the invention can provide an efficient and intuitive way to shuttle through large amounts of material, it would seem from Anderson's disclosure that an editor could only move through the same material one frame at a time with the jog function he describes.

Nor would Anderson's disclosure suggest that his jog function should be modified to perform shuttling operations, because Anderson already presents a solution to the problem of finding edit points. The Anderson document therefore would not suggest to one of ordinary skill that an alternative solution should be sought. And Anderson's characterizations of his keyboard as representative of top-of-the line editing systems would further dissuade one of ordinary skill from seeking alternative approaches to the problem of seeking an edit point. Anderson therefore fails altogether to suggest the invention as now presented in amended claim 15.

Claims 21, 27, 33, 39, 45, 63, and 65 also distinguish over the prior art of record for at least reasons similar to those advanced in support of claim 15.

Claim 51

Claim 51 stands rejected as anticipated by Anderson. As presented above, Anderson discloses a keyboard for a computer editing system that is said to be representative of features available in top-of-the line computer editing systems. It includes a TRIM IN key next to a TRIM OUT key, which are said to allow the user to make "plus or minus" adjustments ("trims") to the edit point numbers (p. 69, col. 2). Trims are said to be entered in frame numbers, or in hours-minutes-seconds-frames, depending on the edit system.

But Anderson's frame number-based trim keys are different from the forward/reverse trim key arrangement as now claimed in amended claim 51. Anderson's keys require a user to enter some kind of numerical value to make an adjustment. But in the claimed arrangement, actuations of the keys cause different amounts of video material to be trimmed. More specifically, an actuation of a first of the four keys causes a plurality of images to be trimmed in a reverse direction,

and an actuation of a second of the four keys causes one image to be trimmed in a reverse direction. Conversely, an actuation of a third of the four keys causes one image to be trimmed in a forward direction, and an actuation of a fourth of the four keys causes a plurality of images to be trimmed in a forward direction.

This aspect of the invention can allow a user to efficiently and intuitively move backwards and forwards through material by different amounts to trim a scene in a video composition using only a few keystrokes of the fingers of one hand. For example, a user could begin by coarsely moving a transition several images at a time using the multi-image keys until an approximate new transition point is found. The user could then tweak the exact location of the transition using the single-image keys. If the user passes the optimal transition point, he or she can then begin single-image or multi-image reverse trimming operations in a single keystroke.

In a more specific example of the editing of a dance performance shot with multiple cameras, the user could use the multi-image keys to select a different one of the dancer's steps for the transition point based on the visual content of the video material. This selected step might be the last step before a boom becomes visible, for example, or it might just be a slightly earlier step that the user is experimenting with. Once the step has been coarsely selected, the user can adjust the transition point with the single-image keys to achieve the best visual flow from one camera's vantage point to another's. The best visual flow might be achieved by setting the transition point when one of the dancer's feet is at its very highest point, for example, or when his or her arms are fully outstretched. The four-key interface of this aspect of the invention allows this entire trimming process to be performed quickly and intuitively while leaving one hand free to perform other operations.

Anderson presents as an example a multi-take dance sequence in which a director decides to cut to a particular take for four seconds at a point 30 seconds into a song (see p. 70, col. 1, ¶ 1). To do this, the editor would begin by entering the record start point (01204000) into both the record and playback VTRs. The editor would then activate the "trim in" key for the playback VTR and enter a calculated offset (07301520). This offset is obtained by subtracting one code number from another (page. 69, col. 2, ¶ 3).

Anderson's trim keys are therefore significantly different from those of the invention as it is presented in claim 51. In the invention, the user can use the trim keys to intuitively move through material in the forward and reverse directions at different speeds with one hand, while looking at

the screen. In Anderson's method the trim keys are for use with numerical values that have been obtained by mathematical subtraction. This calculation-based approach clearly fails to anticipate the intuitive single-key/multi-key approach as now claimed in amended claim 51. Nor does any other set of keys in the Anderson reference perform the key functions as now claimed in claim 51.

There is also nothing in the Anderson reference that would point to the invention's the intuitive single-key/multi-key approach. And Anderson's characterizations of his keyboard as representative of top-of-the line editing systems would further dissuade one of ordinary skill from seeking alternative approaches to trimming. Anderson therefore does not suggest the invention as now presented in amended claim 51.

Claim 67

Claim 67 stands rejected as anticipated by Anderson. As presented above, Anderson discloses a keyboard for a computer editing system that is said to be representative of features available in top-of-the line computer editing systems. As shown in Fig. 3.6, it includes, on the left hand side of the 36 keys of a standard keyboard, a TRIM IN key next to a TRIM OUT key that are above, and to the right of MARK IN and MARK OUT keys. It also includes, on the right hand side of the 36 keys of a standard keyboard, a series of the following five keys: REW, FWD, PLAY, STOP, and adjacent those keys on the right hand side a SLOW key (p. 69, col. 1).

But this key arrangement is different from the forward/reverse trim key arrangement as now claimed in amended claim 67. Anderson's trim and mark keys are both located on the right hand side of the standard keyboard, while amended claim 67 requires trim and mark keys to be on the right and left sides, respectively. More specifically, claim 67 presents a video editing system that is 1) operative in response to signals from a first set of keys on a left hand side of the 36 alphanumeric keys in the standard alphanumeric keyboard to control marking operations on video information, 2) operative in response to signals from a second set of keys on a right hand side of the 36 alphanumeric keys in the standard alphanumeric keyboard to control shuttling of playback of the video information, and 3) operative in response to signals from a third set of keys on the right hand side of the 36 alphanumeric keys in the standard alphanumeric keyboard to control trimming of the marked video information.

This distribution of editing functions among the 36 alphanumeric keys of a standard keyboard allows the user a high degree of productivity. The user can perform marking

operations with one hand, while selecting between trimming and shuttling operations with the other. An experienced user can therefore mark edit points immediately after, or even during, shuttling without taking his or her eyes away from the video material. The same experienced user can also mark and trim in a similar manner. And this experienced editor can even move back and forth between the shuttle and trim modes while maintaining his or her left hand on the mark keys. This overall mode of operation is both intuitive and powerful.

The Anderson configuration does not allow the user to easily operate the TRIM and MARK functions with different hands. And it is even more awkward to for the user to switch from the TRIM IN and TRIM OUT keys to the FWD and REW keys while continuing to perform mark operations, because these two sets are located on opposite sides of the keyboard. Anderson therefore fails to anticipate claim 67 as now amended. Nor does Anderson disclose anywhere that his representative keyboard should be modified in such a way as to suggest the invention as now claimed in amended claim 67.

Claim 48

The invention, as presented in amended claim 48 relates to an alphanumeric keyboard for use with a computerized video editing system. This keyboard includes 36 alphanumeric keys and additional keys with typographical symbols disposed in a standard keyboard layout. A set of three adjacent keys includes a first key on the user's left bearing a label indicative of a reverse shuttling function, a second, central key bearing a label indicative of a pause function, and a third key on the user's right bearing a label indicative of a forward shuttling function.

This type of keyboard presents an intuitive and easy-to-learn user interface for a computer-based editing system. Providing three adjacent keys that include forward and reverse shuttling functions placed around a pause function allows the user to shuttle through large quantities of material and locate an edit point with three fingers of one hand that does not leave the keyboard. This allows the user to then quickly perform other keyboard-based editing functions, instead of having to move back and forth between mouse and keyboard.

Claim 48 stands rejected as obvious over Anderson in view of Millis et al. As presented above, Anderson discloses a keyboard for a computer editing system that is said to be representative of features available in top-of-the line computer editing systems. It includes a series of the following six keys: REW, FWD, PLAY, STOP, CUE, SLOW (p. 69, col. 1).

Millis et al. disclose a controller 36 that includes an interactive control icon 40 and an interactive slider bar 38 (see Fig. 2). The slider bar has a bar-shaped control dial, standard playback direction/velocity indicators, and a number of control buttons corresponding to the position of the playback direction/velocity indicators. These include standard playback indicators and control buttons corresponding to fast-reverse 42, reverse play, 44, step-reverse 46, stop 48, step-forward 50, forward play 52, and fast-forward 54 (col. 4, lines 31-40).

But Anderson and Millis do not disclose the invention as claimed in claim 48, whether taken alone or in combination. Neither Anderson or Millis discloses or suggests three adjacent alphanumeric keyboard keys that include forward and reverse shuttling functions placed around a pause function. And even assuming that one of ordinary skill in the art would be motivated to combine the disclosures of Millis & Anderson, this combination of disclosures does not come any closer to suggesting the invention as claimed in claim 48.

Specifically, Anderson provides a six-key arrangement that does not include forward and reverse shuttling functions placed around an adjacent to a pause function. And Millis provides a mouse-based interface that includes seven control positions, but does not disclose where keyboard equivalents to these functions might be. Were one of ordinary skill to assign keyboard equivalents for the Millis system, therefore, the combination of references only teaches Anderson's six-key interface or Millis's seven-position interface. And neither of these includes three adjacent alphanumeric keyboard keys with forward and reverse shuttling functions placed around a pause function.

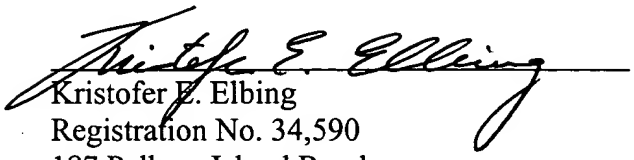
Nor is there any teaching in either Anderson or Millis to modify their disclosures in such as way as to suggest the invention. And Anderson's characterizations of his keyboard as representative of top-of-the line editing systems would further dissuade one of ordinary skill from seeking alternative approaches to shuttle key arrangements. Millis and Anderson therefore do not disclose or suggest the invention as claimed in claim 48.

The remaining claims are dependent, and should be allowable for at least the reason that they depend on an allowable claim. This application should therefore now be in condition for allowance and such action is respectfully requested. The Commissioner is hereby authorized to

charge any additional fees that may be required, or credit any overpayment, to Deposit Account No. 50-0750.

Respectfully submitted,

September 7, 2004
Dated



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